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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/536,347	03/27/2000	Andrew D. Bailey III	LAM1P126/P0562	3591

22434 7590 09/23/2002
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EXAMINER
ALEJANDRO MULERO, LUZ L

ART UNIT PAPER NUMBER

1763

DATE MAILED: 09/23/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

72-11

Office Action Summary

Application No.

09/536,347

Applicant(s)

BAILEY, ANDREW D.

Examiner

Luz L. Alejandro

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-- Th MAILING DATE of this communication appears on th cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 July 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-18 and 26-29 is/are pending in the application.
- 4a) Of the above claim(s) 17 and 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-16 and 26-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 2-7, 12, and 26-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Moslehi et al., U.S. Patent 5,464,499.

The rejection is maintained as stated in paper #9 mailed 4/23/02 with respect to claims 2-7, 12, and 26-29 for the reasons of record.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moslehi et al., U.S. Patent 5,464,499 in view of Ye et al., U.S. Patent 6,178,920 B1.

The rejection is maintained as stated in paper #9 mailed 4/23/02 with respect to claims 9 and 14 for the reasons of record. With respect to claim 13, the examiner respectfully submits that placing a sleeve over the magnet 72 in Moslehi et al. will

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protect the magnet from intermittent plasma which may reach the magnet (see Fig. 1 which clearly shows that the magnet 72 overhangs the portion of the chamber 38 which protects the magnet from the plasma).

Claims 10-11 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moslehi et al., U.S. Patent 5,464,499 in view of Shan et al., U.S. Patent 6,113,731.

The rejection is maintained as stated in paper #9 mailed 4/23/02 with respect to claims 8, 10-11, 13, and 15-16 for the reasons of record.

Claims 10-11 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moslehi et al., U.S. Patent 5,464,499 in view of Tan et al., U.S. Patent 5,795,451.

The rejection is maintained as stated in paper #9 mailed 4/23/02 for the reasons of record.

Claims 8 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moslehi et al., U.S. Patent 5,464,499 in view of Dandl, U.S. Patent 5,370,765.

Moslehi et al. is applied as above but fails to expressly disclose the magnetic elements within the plasma region and the plasma being able to fill the entire process chamber in which the magnetic elements are disposed. Dandl discloses an apparatus (see figs. 4-4A) in which magnets are in the plasma region and the plasma is able to fill

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the entire process chamber in which the magnetic elements are disposed (see col. 13-line 65 to col. 14-line 12). In view of this disclosure, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Moslehi et al. so as to dispose the magnets within the plasma region because this would increase the magnetic coupling in the plasma which would improve the performance of the apparatus.

Response to Arguments

Applicant's arguments filed 7/29/02 have been fully considered but they are not persuasive. Applicant argues that the examiner's interpretation of what constitutes "the chamber" is in error. However, the examiner believes that the interpretation taken in the previous office action is not unreasonable and is a proper interpretation when examining the claim and giving the claim its broadest reasonable interpretation. Regarding applicant's contention that the magnets are shielded from the plasma by the collar 38, it appears from a view of Fig. 1, of the Moslehi et al. reference, that the magnets are partially shielded but not completely shielded as the collar does not extend the complete length of the magnet. Therefore, placing a sleeve on the magnet in Moslehi would give the magnet complete protection from the plasma. Concerning applicant's argument that there is no motivation to combine Tan with the Moslehi et al. reference, the examiner refers applicant to column 1, lines 35-41, for instance, which states that because of the larger sizes of wafers it is better to have a rotating magnetic field as opposed to a stationary magnetic field in order to improve the quality of the process. The examiner

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believes this is appropriate motivation for combining the Tan reference with Moslehi et al..

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

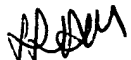
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Luz L. Alejandro whose telephone number is 703-305-4545. The examiner can normally be reached on Monday to Thursday from 7:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory L. Mills can be reached on 703-308-1633. The fax phone numbers

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for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



LLAM

September 20, 2002



GREGORY MILLS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700